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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,164	11/25/2003	Stephan V. Drappel	D/A1388	7012

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EXAMINER

FAISON, VERONICA F

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,164

Applicant(s)

DRAPPEL ET AL.

Examiner

Veronica F. Faison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 20, 21, 28-30 and 34-36 is/are rejected.
- 7) ☒ Claim(s) 6-19, 22-27, 31-33 and 37-61 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2-6-04, 4-15-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5, 20, 21, 28-30, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al (US Patent 6,336,965) in view of King et al (US Patent 6,057,399).

Johnson et al teach a modified pigment which have attached groups onto the pigment by means other than adsorption (abstract). The reference further teaches that the modified pigment may be included in liquids (aqueous or non-aqueous) and ink (printing inks and ink jet inks) (col. 3 lines 19-25). The functional group attached to the

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pigment may include OR, COOR, SO₃H and PO₃H₂ which are oxygen-containing functional groups (col. 4 lines 9-22). Typical inks that the modified pigments are useful ink are phase change ink jet inks, lithographic and ink jet applications (col. 11 lines 4-11). Johnson et al fails to teach the specific ink carrier as claimed by Applicant.

King et al teach a phase change ink composition comprising a fatty amide containing material. The fatty amide containing material comprising a tetra-amide compound. The preferred tetra-amide compounds for producing the phase change ink carrier composition are dimer acid based tetra-amides which is preferably include the reaction product of a fatty acid, a diamine (ethylene diamine) and a dimer acid (col. 3 lines 23-30). The fatty amide containing material can also comprise a mono-amide such as stearamide, stearyl stearamide and behenyl behenamide (col. 3 lines 48-62). An isocyanate-derived may be used in combination with the amide-based carrier. The compositional ranges of the ink carrier composition are as follows: about 10 to about 50 weight percent of tetra-amide compound, about 30 to 80 weight percent of a mono-amide compound, about 0 to about 40 weight percent of a tackifier, about 0 to about 25 weight percent of a plasticizer and about 0 to about 2 percent antioxidant (col. 4 lines 60-67). Where the inks are employ a colored isocyanate-derived resin as either the sole colorant material or uncolored resin may be used in combination with conventional phase change ink colorant material including dyes and/or pigments (col. 5 lines 1-15). The reference also teaches that polyethylene wax may be included in the ink composition (claim 20).

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Therefore it would have been obvious to one of ordinary skill in the art to use the pigment as taught by Johnson et al in the ink composition of King et al, because Johnson et al teaches that the modified pigment may be used in a phase change ink composition.

Allowable Subject Matter

Claims 6-19, 22-27, 31-33, 37-61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The references alone or in combination fail to teach the following:

1. structure of claim 6,
2. urethane,
3. isocyanate-derived material the is the adduct of three equivalents of stearyl isocyanate and a glycerol propoxylate,
4. pigment particles having a primary volume average particle size of no more than about 0.5 micron, or
5. a process for preparing a phase change ink.


Conclusion

The remaining references listed on forms 892 and 1449 have been reviewed by the Examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


VFF
June 28, 2004